BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies.	Rulemaking R.06-04-009

CEC Docket no. D.07-OIIP-01

COMMENTS OF THE GREEN POWER INSTITUTE ON THE PROPOSED JOINT GHG REPORTING PROTOCOL

July 2, 2007

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Introduction

Pursuant to the June 12, 2007, *Administrative Law Judge's Ruling Regarding Comments on Staff Reporting Proposal*, in R.06-04-009, the **Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies**, the Green Power Institute (GPI) respectfully submits these *Comments of the Green Power Institute on the Proposed Joint GHG Reporting Protocol*. Our Comments focus on the following issues that are raised by the *Joint California Public Utilities Commission and California Energy Commission Staff Proposal for an Electricity Retail Provider GHG Reporting Protocol* (*Joint Proposal*) that is Attachment A to the ALJ's *Ruling*: tracking greenhouse gas emissions, building considerations about greenhouse gases into the dispatch process, marginal dispatch analysis for unspecified imports, and contract shuffling.

The GPI's overall reaction to the *Joint Proposal* is that it is too narrowly focused on California, and fails to anticipate the burgeoning regional context in which future efforts to reduce greenhouse gases will occur. While it is true that the requirements of AB 32 are memorialized in statute and must be enforced, regardless of whether or the extent to which our neighbors join in, it is not necessary to focus on this eventuality as a likely outcome. On the contrary, we believe that future planning for AB 32 compliance should be based not only on anticipating, but on actively promoting a cooperative regional approach to all aspects of the program, including electronic tracking of greenhouse gases, while taking care of California's particular interests.

Tracking Greenhouse Gas Emissions

The *Joint Proposal* describes itself (page vi, *Executive Summary*) as a "draft proposal for the tracking and reporting of GHG emissions associated with all retail sales of electricity within California." The *Joint Proposal*, which is designed to fulfill the requirements in AB 32 to create a load-based reporting system for greenhouse gas emissions for California retail providers, is based on an audit-trail type of accounting system for tracking emissions from source to retail load, using conventions such as a predetermined set of emissions factors for estimating emissions from unspecified system resources in various regions and markets. While the reporting protocol proposed in the *Joint Proposal* may meet the minimum requirements set forth in statute, we believe that it comes up short in terms of moving the overall AB 32 program forward.

The second bullet question on page 2 of the ALJ's *Ruling* asks: "whether the intent should be to design a reporting protocol that could be adopted directly by other states in the region and, if so, whether modifications to the Staff proposal would be needed for this purpose." In the GPI's opinion, the intent should not be just to design a protocol that **could be adopted** by other states, the intent should be to design a protocol in conjunction with other states and neighboring provinces that **can be and will be adopted** by all. The Governor has already set this process in motion with the multi-state / province cooperation agreement on greenhouse gases that was recently consummated, and the effort recently launched to track greenhouse gases jointly with our neighboring Pacific states, and it is our hope that these efforts will expand rapidly.

The third bullet question on page 2 of the ALJ's *Ruling* asks: "how the proposed reporting requirements including, in particular, the use of estimates, could affect the integrity of greenhouse gas (GHG) emission allowances and whether the requirements may have implications on the ability to trade GHG emission allowances with other regimes." We believe that the correct answer to this query is that the ability to create a broad, credible market for greenhouse gas allowances (cap and trade) depends critically on the creation of an accurate and reliable tracking system, among other factors. The

reporting protocols in the *Joint Proposal* do not provide the framework for such a market. Nothing short of an electronic tracking system will do the job.

It is the strong belief of the Green Power Institute that in order to be successful, greenhouse gas reduction programs at any jurisdictional level (state, regional, federal, international) will require electronic tracking of greenhouse-gas emissions from their source to their retirement in conjunction with approved allowances. While an interim tracking protocol of the kind described in the *Joint Proposal* can be employed until a regional electronic tracking system can be put into service, we believe that the efforts of both Commissions involved in the *Joint Proposal*, as well as the ARB, should be geared towards creating a regional electronic greenhouse gas tracking system from the beginning. This overriding orientation is missing from the *Joint Proposal*.

The recent effort to create a regional tracking system for renewable energy in the context of the state's Renewables Portfolio Standard program provides a sound model, and quite possibly a sound and readymade platform, for the development of a regional greenhouse gas tracking system for the emissions attributable to electricity generation. Several years in the making, WREGIS, the Western Renewable Energy Generation Information System, went live just one week ago, on June 25, 2007. WREGIS development was funded by and directed by the CEC, but the development process was conducted as a joint effort with the Western Governor's Association, and with the participation of the states and provinces that are part of the WECC. It is set up to eventually function as an independent, self-financing and self-governing entity that is housed under the WECC, once it has met various milestones and is able to transition away from CEC funding.

Although WREGIS has been established as a voluntary tracking system for renewable energy throughout the West, the state of California has mandated its use for energy that is to be counted towards the renewables obligations of California retail providers, including renewable energy that is generated out-of-state and imported. It is likely that additional jurisdictions will join in mandating WREGIS use for their renewables programs, especially as WREGIS is proven to be able to do the job it has been given, which is to track

renewables reliably and accurately, and ensure against double counting. The same approach could be followed in the development of a regional greenhouse gas tracking system for the west. It should be noted that while WREGIS is a voluntary-participation tracking system, experience with mandatory attribute tracking systems in the Eastern US, like NEPOOL and PJM, demonstrate that mandatory, comprehensive tracking of all generation is absolutely doable. APX, the software contractor for WREGIS, as well as for both NEPOOL and PJM, has stated that WREGIS can be modified relatively easily to track the greenhouse gas emissions associated with the electricity generation that serves California load. It appears that we will not have to, in effect, re-invent the wheel in order to electronically track greenhouse gas emissions associated with electricity production throughout the western United States.

The *Joint Proposal* acknowledges the desirability of electronic tracking in several places, but it never really takes on the challenge. Instead, electronic tracking is dismissed as something to be considered elsewhere. For example: "While staff does not recommend using E-Tags at this time, we were heartened to learn of the availability of tracking software which might be modified to meet tracking needs." (*Joint Proposal*, page 22.) We strongly disagree. We believe that the *Joint Proposal* should be oriented from the start towards the development of a regional electronic tracking system for greenhouse gas emissions. With that orientation, the interim tracking system that will be used until there is an electronic tracking system should be designed to transition easily into the anticipated electronic system once it is ready to go into service. It is absolutely critical for California to have an electronic tracking system in operation before 2012, when AB 32 compliance obligations go into effect. Creating a regional electronic tracking system based on the WREGIS model should begin immediately.

AB 32 and Traditional Utility Dispatch

Section 2.3.5 of the *Joint Proposal*, on page 7, is titled: "Minimization of Unintended Consequences." The section discusses the principle that the greenhouse gas reporting protocols adopted in this proceeding should not "distort the electricity markets by causing

retail providers to make non-optimal resource choices." The *Joint Proposal* goes on to assert its intention to avoid creating incentives for suppliers to misuse or avoid the new California ISO forward markets that will be created as a part of the MRTU. The new markets are designed "to optimize the efficient use of the transmission system while encouraging least-cost dispatch."

On its face, attempting to avoid distorting electricity markets makes obvious sense. Without question, it is in everybody's interest to optimize the use of the state's admittedly inadequate transmission system, and to encourage least-cost dispatch of generating sources to the maximum extent possible. On the other hand, the fact is that the core purpose of AB 32 is to change electricity and energy markets generally in fundamental ways that transition the mix of energy sources used by society to lower-carbon resources, and to more efficient energy use. This does not imply the creation of an incentive for retail providers to make non-optimal resource choices. On the contrary, it means that in the carbon-constrained world of the future the bundle of criteria by which we judge the efficiency of resource choices will have to be expanded to include considerations about carbon content, as well as cost and accessibility factors. This is not to say that the greenhouse gas reporting protocol should purposely affect resource allocation, but that the enactment and enforcement of the overall rules (still under development) for greenhouse gas emissions trading and retirement, subject to AB 32 and whatever regional, national, and international programs arise in the coming years, should indeed influence energy markets of all varieties. The reporting protocol should support the new market, however it is structured, and whatever its eventual rules. The purpose of the protocols should not be to preserve the existing system in which carbon-intensity does not influence dispatch decisions in any way, or to avoid having the carbon intensity of power sources enter into the dispatch equation in the future.

The concerns expressed at the April CPUC workshops, and repeated on page 7 in the *Joint Proposal*, that implementation of the MRTU at the Cal ISO could mean that utilities will end up with less control of their power supplies, from the perspective of greenhouse gas liabilities, is a legitimate concern. In fact, it is our belief that it will quickly become

apparent to the ISO that the carbon liabilities that come attached to power that is procured through their markets is a major consideration for both suppliers and purchasers, and the market will have to be structured and operated accordingly. It is conceivable that future market rules may lead to forward markets that offer a range of products for any given time increment based on carbon liability burdens, with prices inversely proportional to carbon intensity. In any case, the greenhouse gas burden of energy procured through ISO markets will have to be taken into account.

Marginal Dispatch Analysis for Imported Power

California imports substantial quantities of power from out-of-state sources, on the order of twenty to thirty percent of its total energy supply. The two major corridors for bulk power imports are the Pacific Northwest, and the Southwest. Each of these regions has a mix of gas and coal-fired fossil generators, while the Pacific Northwest also has a substantial quantity of large hydro generators. Much of the imports from these two regions are from unspecified, system resources.

In past and current California greenhouse gas inventories that have been prepared by the CEC, emissions factors for unspecified system imports from the Northwest and the Southwest have been based on average emissions factors for the respective regional supplies. The *Joint Proposal* adopts a new methodology that is based on a marginal dispatch analysis for out-of-state generation. As explained on page 9 of the *Joint Proposal*:

> For emissions from unspecified net imports, staff conducted a marginal dispatch analysis of the Northwest and Southwest regions. In other words, this analysis recognizes that California is not served equally by all resources from out of state suppliers. For example, dispatch model runs for power imported over the Southwest interties revealed that the generation increased to provide exports to California comes primarily from natural gas while baseload coal facilities mostly serve the native load of the states where they are located. Compared to the average approach used for the net system power reports, the marginal methodology in the staff report would reduce the amount of coal assigned to California load (from 20 percent to 14 percent in 2005) and increase the amount of natural gas (from 38 percent to 44 percent). (Alvarado and Griffin, 2007)

On page 18 the *Joint Proposal* states that for power from the Southwest: "The modeling runs show that 96% of the imports were natural gas and 4% coal. Workshop parties were supportive of the principal finding, that natural gas is the Southwest marginal resource." The blanket statement that workshop parties were supportive of the principal finding misstates the range of positions that were expressed at the April workshops. The Green Power Institute, for example, expressed our concerns with the marginal-dispatch model at the workshops, and others did as well. Our primary concern with this approach is that what this modeling conclusion says, in effect, is that when it comes to California taking responsibility for emissions generated in other states for power that is consumed in California, we'll take credit for the clean generators in those regions, and assign credit for the dirty generators to the native (non-California) load. The Green Power Institute believes that this is the wrong approach to take, based on both technical and policy considerations.

The electricity generation and transmission infrastructures in the West were built with the knowledge and understanding that California load is an intrinsic part of the integrated western-interconnect system. In fact, if the Southwest was not a net supplier to California, it would not have as much installed generating capacity as it does have today, particularly not as much baseload generating capacity. If the Southwest was not structured to be a net supplier of electricity to California, it would have to serve its own fluctuating load on its own, including supplying peak and partial peak power as necessary, and would use generating sources that are suitable for providing such service, which is to say, gas-fired for load following, as well as coal for baseload. In other words, it is flawed reasoning from a technical perspective to assign only load-following resources in the Southwest to California load based on a marginal dispatch model, leaving behind a residual collection of generation for the native load that is overloaded with baseload resources, and would not be well suited to serve the native load were it not for the interconnection with, and exports to, California. The western interconnect system developed the way it did with California load as an important and intrinsic component. The marginal dispatch model, which is based only on responses to short-term market signals, does not take this dimension of the system into account.

It is also instructive to consider how unspecified sources will be handled in the coming world of multi-state electronic greenhouse gas emissions tracking and trading. Brokers and suppliers that procure power from a large number of sources based on constantly changing market conditions will also be acquiring electronic tags for the associated greenhouse gas emissions liabilities that were generated in association with the power they are acquiring. Those who purchase from these suppliers will receive not only electricity, but also emissions liabilities as well. Our expectation is that the intermediate brokers and suppliers will either pool their energy and emissions liabilities and distribute the product (energy and emissions liabilities) as a blended product, or, depending on the rules that are ultimately enacted for greenhouse gas accounting, energy suppliers and distributors might offer their product in a range of prices, with cheaper power carrying more emissions liabilities per MWh than more expensive power during any given time segment. In either case, the marginal dispatch model is not consistent with what will happen when electronic tracking of greenhouse gases goes into effect, and that is a significant liability for the proposed interim tracking system.

The marginal allocation method is also wrong from a policy perspective because it is ultimately self serving, regardless of its technical merit, and it is unlikely to promote the kind of cooperation with other states and provinces that will be needed in order to combat global warming. The struggle to reduce global greenhouse gas emissions is an extraordinary challenge. Quibbling over the apportionment of emissions from unspecified pools of system power in today's market will not help. Ultimately, the newly emerging marketplace for greenhouse gas emissions liabilities and allowances will determine how these emissions are allocated. For the interim tracking system, we believe that proportional allocation is the best approach to take.

On June 27, 2007, the Commission issued an *Administrative Law Judges' Ruling Incorporating into the Record Materials Regarding Reporting Issues*, one of which documents is a letter, dated June 22, 2007, written by the Executive Directors of the CPUC and the CEC to a mailing list of Western Electricity Representatives. This letter describes the marginal dispatch analysis to interested parties in the western region of the

U.S., and solicits their reactions. It will be interesting to see how neighboring states who are affected by this proposed allocation react. It is unfortunate that the letter did not invite the recipients to join in an effort to develop a regional electronic tracking system for greenhouse gases.

Contract Shuffling

The *Joint Proposal* goes to considerable lengths to guard against contract shuffling, in which retail providers located in states with greenhouse-gas regulations trade away contracts with high greenhouse-gas emitting resources for contracts with low-emitting resources that are currently supplying providers who are located in states lacking greenhouse gas regulations. While contract shuffling that results in no net change in total, system-wide greenhouse gas emissions is useless and counter productive, we believe that the level of concern about contract shuffling expressed in the *Joint Proposal* is overblown at this point in time. In particular, it is important to keep in mind that although greenhouse gases for California retail providers will be tracked beginning in 2008, there will be no compliance requirements until 2012, five years into the future. Thus in regards to the immediate future, we question whether there are any real incentives in place to cause retail providers to engage in contract shuffling activities now. Contract shuffling will entail a not insignificant cost for those who engage in it, so it is unlikely to happen unless there is a suitable reward to motivate such questionable behavior.

It is both our hope and expectation that by the time compliance requirements for greenhouse gas emissions go into effect in California in 2012, we will have an operating electronic tracking system for greenhouse gas liabilities and allowances, and furthermore that most or all of our neighboring states and provinces will also have greenhouse-gas reduction programs in effect, operating cooperatively with California and each other. There is no question that broad and uniform market rules across the region would provide the best assurance against abusive contract shuffling that is intended to scuttle the real reductions in greenhouse gas emissions that are the objective of the AB 32 program. California is working actively towards the goal of broad regional cooperation. Indeed,

Governor Schwarzenegger has been the primary initiator of regional cooperation on global warming solutions, and continues to promote collaborative regional initiatives on a variety of fronts. This is the real solution to any long-term concerns about the use of contract shuffling to thwart the state's efforts to achieve the real reductions in greenhouse gases that are the essence of AB 32.

On page 15 the *Joint Proposal* alludes to some of the abuses that occurred during California's energy crisis of 2000 – 2001, as a warning about what contract shuffling could lead to:

> Some parties are concerned that there could be cross-over between the Northwest and Southwest; i.e. sellers might resell power from one region in such a way that the seller claims it comes from one region but actually dispatches from the other. This did occur during the 2000-2001 energy crisis, and parties may be concerned that sufficiently different regional profiles could induce such contract shuffling and misrepresentation.

It should be noted that there is a fundamental difference between some of the shuffling that took place during the energy crisis, which was mostly into and out of California, and what it would take to shuffle energy between the Northwest and the Southwest in order to take advantage of their differential greenhouse gas emissions profiles. The transmission pathways into California from the Northwest and the Southwest are physically remote from each other, and there is scant transmission infrastructure currently in place that links them. For example, in order to transfer Northwest power to the Southwest interties that feed southern California, it would be necessary to route it through Utah on 360 kV lines that are already used to capacity for many of the hours of the year, or to go even further east, still using medium voltage lines for a substantial portion of the journey. There is simply no all-high-voltage route available, outside of congested path 15 through the California central valley. Contract shuffling from the Pacific Northwest to the Southwest would be an expensive proposition.

Efforts to route-out contract shuffling that is intended to reduce the carbon intensity of a regulated retail provider's energy-supply portfolio at the expense of some other provider's portfolio that is not subject to carbon regulation run headlong into an interesting irony.

Any greenhouse gas reduction system that is intended to reduce greenhouse gas emissions using market mechanisms is likely to encourage regulated entities to shed their highest emitting sources, and acquire lower-emitting sources to the extent that they are able to do so, subject to the inevitable cost constraints that govern procurement decisions. Indeed, from the perspective of actions that a regulated provider can undertake in order to meet declining allowance rights, that is exactly what providers should be attempting to do.

Retail providers in currently unregulated jurisdictions that agree to trade rights to their low-emitting resources in return for remuneration will be taking a calculated risk. To the extent that climate change is a real issue with real consequences that have broad impacts, and the Green Power Institute believes that this is indeed the case, then efforts to combat climate change will inevitably broaden over time. Currently unregulated providers that allow their existing portfolios to increase in carbon intensity for short-term gain risk finding themselves at a serious disadvantage when greenhouse gas regulation eventually, and in our opinion inevitably, comes their way. A competitive marketplace provides a mechanism for market participants to exercise their judgment about current and future values of the greenhouse gas emissions that are associated with the production of their energy-supply portfolio. A cap and trade system encourages providers to shop for their energy supplies based on carbon intensity, as well as cost considerations. Reasonable strategies for retail providers include both ridding themselves of high-emitting sources, and acquiring low-emitting sources. That is what a cap and trade system is based on. There is no bright line between actions such as these and contract shuffling.

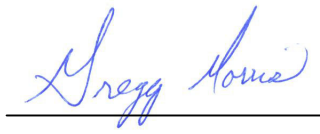
Conclusion

The Green Power Institute congratulates Commission staff on the production of the *Joint Proposal* on for a greenhouse gas reporting protocol for retail electricity providers in California. While we object to the use of the marginal dispatch approach to determining emissions factors for unspecified system resources, particularly those in the Southwest, on the whole we believe that the *Joint Proposal* provides a reasonable basis for an interim reporting protocol that can be used while a comprehensive electronic source-to-allowance

tracking system can be developed. However, we are concerned that the *Joint Proposal* does not actively promote, if not actually initiate, the process of developing the electronic greenhouse gas tracking system of the future. California has been through this process in the recent past on behalf of renewable energy, resulting in the newly inaugurated WREGIS tracking system for renewable energy certificates. We need to begin now to develop an electronic tracking system for greenhouse gases, and one of the first orders of business should be to determine the extent to which such a system can be based on WREGIS. The WREGIS governing committee, of which GPI Director Gregg Morris is a member, is committed to ensuring that WREGIS is functioning smoothly and reliably in tracking renewable energy before undertaking any new enhancements to the system. On the other hand, we are well aware of the need for electronic tracking of greenhouse gases, and have already begun discussions on the role that WREGIS might play.

Dated July 2, 2007, at Berkeley, California.

Respectfully Submitted,



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PROOF OF SERVICE

I hereby certify that on July 2, 2007, I have served a copy of the COMMENTS OF THE GREEN POWER INSTITUTE ON THE PROPOSED JOINT GHG REPORTING PROTOCOL upon all parties listed on the Service List for this proceeding, R-06-04-009. All parties have been served by email or first class mail, in accordance with Commission Rules.

Gregory Morris